

What is claimed is:

1. An isolated, enriched, or purified nucleic acid molecule encoding a PAK5 polypeptide fragment, wherein said nucleic acid molecule:
  - (a) encodes a polypeptide consisting essentially of the amino acid sequence set forth in SEQ ID NO:30;
  - (b) is the complement of the nucleotide sequence of (a);
  - (c) hybridizes under highly stringent conditions to the nucleotide molecule of (a) and encodes a naturally occurring kinase polypeptide fragment;
  - (d) encodes a kinase polypeptide comprising the amino acid sequence of SEQ ID NO:30, except that it lacks one or more, but not all, of the following segments of amino acid residues 1-114, 115-379, or 380-398 of SEQ ID NO:30;
  - (e) is the complement of the nucleotide sequence of (d);
  - (f) encodes a polypeptide having the amino acid sequence set forth in SEQ ID NO:30 from amino acid residues 1-114, 115-379, or 380-398 of SEQ ID NO:30;
  - (g) is the complement of the nucleotide sequence of (f);
  - (h) encodes a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:30, except that it lacks one or more, but not all, of the domains selected from the group consisting of a C-terminal domain, a catalytic domain, a spacer region, and a C-terminal tail; or
  - (i) is the complement of the nucleotide sequence of (h).
2. The nucleic acid molecule of claim 1, wherein said nucleic acid molecule consists of the nucleotide sequence set forth in SEQ ID NO:28.
3. The nucleic acid molecule of claim 1, further comprising a vector or promoter effective to initiate transcription in a host cell.
4. The nucleic acid molecule of claim 1, wherein said nucleic acid molecule is isolated, enriched, or purified from a mammal.

5. The nucleic acid molecule of claim 4, wherein said mammal is a human.
6. A nucleic acid probe for the detection of nucleic acid encoding a kinase polypeptide in a sample, wherein said polypeptide consists essentially of SEQ ID NO:30.
7. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 12 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
8. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 15 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
9. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 20 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
10. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 30 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
11. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 120 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
12. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 125 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
13. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 130 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
14. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 200 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.
15. The nucleic acid probe of claim 6, wherein said polypeptide consists of at least 300 contiguous amino acid residues of the amino acid sequence set forth in SEQ ID NO:30.

16. The nucleic acid probe of claim 6, wherein said polypeptide consists of amino acid residues 1-114 of the amino acid sequence set forth in SEQ ID NO:30.

17. The nucleic acid probe of claim 6, wherein said polypeptide consists of amino acid residues 115-279 of the amino acid sequence set forth in SEQ ID NO:30.

18. The nucleic acid probe of claim 6, wherein said polypeptide consists of amino acid residues 380-398 of the amino acid sequence set forth in SEQ ID NO:30.

19. A recombinant cell comprising a nucleic acid molecule encoding a kinase polypeptide fragment, wherein said polypeptide is the PAK5 polypeptide.

20. The cell of claim 19, wherein said polypeptide is a fragment of the protein encoded by the amino acid sequence set forth in SEQ ID NO:30.

21. A method for detection of a kinase nucleic acid molecule in a sample, wherein said method comprises:

(a) contacting said sample with the nucleic acid probe of claim 6 under conditions wherein said kinase nucleic acid molecule and said probe hybridize; and

(b) detecting the presence of the hybridization between said probe and said kinase nucleic acid molecule in said sample.

22. A method for detection of a kinase nucleic acid molecule in a sample, wherein said method comprises:

(a) contacting said sample with the nucleic acid probe of claim 7 under conditions wherein said kinase nucleic acid molecule and said probe hybridize; and

(b) detecting the presence of the hybridization between said probe and said kinase nucleic acid molecule in said sample